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**RECOMMENDATIONS FOR INCREASED FOCUS ON CONNECTING PEOPLE WITH
NATURE TO INSPIRE ENHANCED ACTION ON BIODIVERSITY CONSERVATION***Note by the Executive Secretary*

1. The Executive Secretary is circulating herewith, for the information of participants in the fourteenth meeting of the Conference of the Parties to the Convention on Biological Diversity, an information document prepared by the [Children & Nature Network](#)¹ and the [International Union for Conservation of Nature Commission on Education and Communication](#)² (IUCN CEC). This document is relevant to the work of the Convention on Biological Diversity, in particular with regard to Aichi Biodiversity Target 1, decisions XII/2, and XIII/22 on a Framework for a Communication Strategy, and the development of a post-2020 biodiversity framework.
2. The report is being circulated in the form and language in which it was received by the Secretariat. The views expressed in the document are those of the authors and do not necessarily reflect the views of the Secretariat of the Convention on Biological Diversity.

* CBD/COP/14/1.

¹ The Children & Nature Network is leading a global movement to increase equitable access to nature so that children—and natural places—can thrive. Among its contributions, it has developed and houses the most extensive collection of research, news, and thought leadership for connecting children and families to nature.

² The IUCN CEC is a network of more than 1,100 volunteer experts who drive change for the co-creation of sustainable solutions through leading communication, learning and knowledge management in IUCN and the wider conservation community.

RECOMMENDATIONS FOR ACTION

1. National and sub-national governments and stakeholders have the opportunity to implement sector-specific policies to enhance action on connecting people with nature as a key strategy for achieving the Aichi Biodiversity Targets and implementing the Convention on Biological Diversity Post-2020. Such policies include the following (this document provides rationale for the policies):

- Education and child care policies that enable time outdoors in nature and experiential learning about nature in early childhood and throughout life;
- Health and elder care policies that embrace contact with nature as a mechanism for delivering physical and mental health benefits for all people of all ages;
- Community planning and urban development policies to create nature-rich cities that include parks and protected areas tailored to maximize the co-benefits for people and nature;
- Parks, outdoor recreation, and tourism policies that encourage family-friendly experiences; interpretive programmes; and outdoor, nature-based and experiential education;
- Arts and culture policies that promote the integration of culture and nature to develop a sense of oneness with nature while celebrating stories of connection and healing;
- Policies that encourage private sector investment in environmentally sustainable programming, infrastructure, and innovative solutions for connecting people with nature; and
- Policies that call for biodiversity conservation organisations to work across sectors so that all people, equitably and inclusively, experience the diverse benefits of connectedness with nature.

INTRODUCTION

2. This information document presents a synthesis of evidence supporting enhanced action on connecting people with nature as a means for creating the broad-based public and cross-sectoral support and action on biodiversity necessary to implement the Convention on Biological Diversity (CBD) and its Strategic Plan during this and subsequent decades.

3. An important area for enhanced action identified in GBO4 is “Coherent, strategic and sustained communication efforts, strategies, and campaigns to increase awareness of biodiversity and its values, and ways to support its conservation and sustainable use” – i.e., Aichi Biodiversity Target 1. The Convention’s [Communication, Education and Public Awareness](#) (CEPA) programme is an important instrument for delivering on action on Target 1. Decision XII/2 re-enforced the important role of CEPA and led to the development of recommendations for better communication of the values of biodiversity, including a Framework for a Communication Strategy (see Decision XIII/22). The over-arching goal of this framework is to support the implementation of the CBD now and in the subsequent decades leading up to 2050.

4. As is noted in the [description of Aichi Biodiversity Target 1](#), addressing the direct and underlying drivers of biodiversity loss will ultimately require behavioural change by individuals, organisations and governments. Understanding, awareness and appreciation of the diverse values of biodiversity underpin the willingness of individuals to make the necessary changes and actions and to create the “political will” for governments to act.

5. A new synthesis of factors that influence conservation and pro-environment behaviours has been developed by the Children & Nature Network in collaboration with the International Union for Conservation of Nature (IUCN) and several partner organisations worldwide through [#NatureForAll](#) (Charles et al, 2018). Aspects of this evidence that are particularly relevant in the context of the Convention are presented below.

6. This growing body of evidence consistently demonstrates that, in addition to awareness, meaningful experiences and connection with nature are key to engendering stronger valuation, support, and action for biodiversity conservation across generations, sectors, and societies. Increased attention to the importance of public engagement and connection with nature will be important for achieving behaviour change and creating and maintaining the political will for governments to implement the Convention. While they remain critically important, efforts to increase awareness and understanding of biodiversity and its values, and of actions that can be taken, are not enough.

CONTEXT

7. In recognition of the importance of societal disconnect from nature as an indirect driver of biodiversity loss, in 2016 the International Union for Conservation of Nature (IUCN) launched [#NatureForAll](#), a global movement to inspire love, support and action for nature conservation. The [IUCN Commission on Education and Communication](#) and [IUCN World Commission on Protected Areas](#), are co-leading #NatureForAll by bringing together a diverse coalition of partners to collaborate, scale up actions, and broaden their reach to engage people from all walks of life to experience, connect with, and take action for nature. #NatureForAll partners are showing how personal experiences and connections with nature provide powerful benefits for individual and societal health, well-being, and resilience and are a foundation for lifelong support for conservation.

Benefits of Connecting with Nature

8. The benefits of connecting with nature start with our children. For example, infants and toddlers develop healthy, resilient bodies from time spent exploring hands-on and whole-body with natural materials. They are stimulated cognitively and physically by the sights and sounds in outdoor spaces. They develop social skills and bond with family members through shared experiences in the outdoors. (D'Amore, Charles & Louv, 2015; St. Antoine, Charles & Louv, 2012). Outdoor play in school-aged children has been linked to the development of core skills, including problem-solving and reasoning, creativity, curiosity, risk-identification, self-regulation and social and emotional learning. (Greffrath et al., 2011; Strong et al., 2005; Bingley & Milligan, 2004; Korpela et al., 2002). For students, studies are showing positive associations between the greenness of school landscapes and academic performance, such as standardised test scores and rates of graduation (Li & Sullivan, 2016; Wu et al., 2014; Matsuoka, 2010).

9. Evidence supporting linkages between exposure to nature and positive influences on physical and mental health, including among children, was highlighted in the 2015 joint [State of Knowledge Review, Connecting Global Priorities: Biodiversity and Human Health](#), led by the CBD and WHO. Parties to the CBD have also recognised the importance of inter-linkages between biodiversity and human health, including these mental and physical health benefits (Decision XII/21 and Decision XII/6).

10. Children and adolescents with access to nature tend to enjoy more physical activity (Barton et al., 2014). This may contribute to reduced rates of obesity and other chronic diseases, including diabetes and heart disease, as well as enhanced emotional well-being and resilience (Chawla et al., 2014; McCurdy et al., 2010; World Health Organisation, 2004). Research indicates that exposure to nature can also act as a protective factor for the mental health of young people (Piccininni et al., 2018; McCurdy et al., 2010; Louv, 2005).

11. Time spent in nature has an important protective role to play in health and well-being at all ages. From gardening, to cycling, to simply walking outdoors, benefits reported include: improved blood pressure, pulse rates and stress hormone levels (Gladwell et al., 2013; Tsunetsugu et al., 2010; Pretty et al., 2005); enhanced sense of well-being (Chawla, 2015; Louv, 2012; Kuo, 2010); reduced levels of anxiety and depression (Peacock et al, 2007; Pretty et al, 2005); decreased stress and improved work

performance in office spaces (Kaplan & Kaplan, 1989); reduced incidents of aggressive behaviours among Alzheimer's patients in long-term care facilities (Mooney & Nicell, 1992).

12. Connecting with nature is a public health strategy that is often accessible and affordable for many populations, with research demonstrating not only protective values but restorative benefits as well. Positive impacts of nature exposure for adults can include fewer medications, faster recovery from surgery and shorter hospital stays (Maller et al., 2005; Ulrich 1984). Research studies similarly indicate a reduced need for medication and services among mental health patients, while the costs of medication for some conditions, such as Attention Deficit Hyperactivity Disorder (ADHD), may be mitigated when time in nature is considered as part of a treatment plan (Faculty of Public Health, 2010; Faber-Taylor & Kuo, 2009; Faber-Taylor et al., 2001; Faculty of Public Health, 2010).

13. In a rapidly urbanising world, community green and blue spaces not only support a range of health benefits, but can also foster social cohesion. Studies have demonstrated that urban residents living near nature tend to know and respect more of their neighbours. They also report higher levels of mutual trust and willingness to help one another, compared to their counterparts living in more barren surroundings (Kuo, 2010; Korpela et al., 2002; Kuo & Sullivan, 2001; Kuo et al., 1998). Researchers have found that nearby nature helps prevent crime and mitigate some of the psychological precursors to aggression and violence (Kuo, 2010; Kuo & Sullivan, 2001). Similarly, evidence suggests that greening of urban vacant lots can reduce rates of vandalism and violent crimes (Kondo et al., 2016).

14. Connecting people with nature presents economic opportunities as well, particularly within the tourism sector. Representing 10% of world GDP and 1 in 10 jobs globally, tourism has a decisive role to play in job and wealth creation, environmental protection and poverty alleviation (World Tourism Organisation, 2017). Nature-based tourism alone creates a diversity of jobs and contributes to the health of local, regional, and national economies. For example, the niche adventure tourism market, valued at \$263 billion, is one of the fastest growing categories of tourism globally. In Sub-Saharan Africa, the promotion of natural attractions and adventure opportunities helped increase tourism numbers from a small base of just 6.7 million visitors in 1990 to 33.8 million visitors by 2012 (Christie et al., 2014). In the United States, the outdoor recreation economy accounted for 2.0 percent (\$373.7 billion) of GDP in 2016, numbers that are larger and more sustainable than the contributions of industries such as mining and oil and gas extraction (1.4% of GDP) (Bureau of Economic Analysis, 2018).

15. Healthy nature has economic benefits. Healthy and accessible natural environments support healthy people. Healthy people reduce social costs. Achieving these benefits requires that we have access to nature.

PATHWAYS TO BIODIVERSITY CONSERVATION BEHAVIOUR

16. As is highlighted in [Article 8\(j\)](#), Parties to the CBD have agreed to respect, preserve and maintain knowledge, innovations and practices of Indigenous and local communities. Examples of Indigenous world views remind us that we are all one with nature. In the South Pacific, New Zealand's Maori people have traditionally held a deep connection to the environment, focused on their tribal lands and waters in particular. The Maori world view positions Maori as both part of the natural system and guardians for that system (Cowie et al, 2016). In Australia, Indigenous culture was founded on the belief that people and nature are created as one. Tribes had their own wisdom to connect them to the land or "country" (Gammage, 2011; Hendricks & Hall, 2012). For Indigenous peoples, the concept of "country" embodies sustainability. It is the holistic engagement of a person with a specific physical location that is both symbolic and real.

17. For example, in North and South America, Indigenous people have many ways of remembering and practicing Earth-based wisdom. Illustrative, for the Makunas, Eastern Tukanoan groups from the

Northwest Amazon, humans and non-human beings share many of the same places. There is no separation between beings. There is no separation between the visible and invisible, or between culture and nature, making evident the complete interdependence of all living beings. (L. Cayón, *Antípoda* N 7, 2008, p141-173)

18. Increasing evidence indicates that time with nature is critical because it can create a connectedness—that is, an emotional affinity or love of nature, a oneness with all that is. Fortunately experiences in and connection to nature can be facilitated and enhanced throughout our lives, may start at any time, and occur in a variety of settings, including within wild, rural, and urban environments. In fact, connectedness with nature is emerging as a strong predictor of positive conservation behaviours (Mayer & Frantz, 2004; Braun & Dierkes, 2017; Otto & Pensini, 2017; Beery & Jorgensen, 2018).

19. A number of measures of connectedness have been developed in recent years and used to explore the relationship between connectedness and action to benefit the Earth (Tam, 2013; Nisbet et al, 2009). Wright et al, (2014) explain, “Nature connectedness refers to the degree to which individuals include nature as part of their identity through a sense of oneness between themselves and the natural world,” and observe, “(T)here is evidence demonstrating that those who are more connected are more supportive of conservation, and that nature connectedness predicts environmental concern.” Frantz and Mayer (2004) describe connectedness as a sense of “we-ness,” which as a psychological process helps humans to feel empathy for nature, to care for nature, and to feel committed to its protection

20. To increase awareness of and action for biodiversity and its values globally, connectedness provides necessary preconditions for realising desired conservation outcomes. Connectedness takes many forms. It can be stimulated, maintained and enhanced in various ways. However formed, it is a strong predictor of conservation and pro-environment behaviour for people of any age. It can be so powerful that it becomes a way of life, a lifestyle that benefits everyone—from self to others to the environment.

21. Studies have demonstrated a positive relationship between the level of involvement in nature-based activities as diverse as fishing, SCUBA diving and bird watching, and an individual’s concern for the resources on which their activity depends (Oh & Ditton, 2008; Oh & Ditton, 2006; Thapa, Grefe & Meyer, 2006; Cheung, Lo & Fok, 2017; Hvenegaard, 2002; McFarlane & Boxall, 1996). Others have found an association between people’s attachment to the specific places where they interact with nature and their tendency to care for the Earth, suggesting that people who develop a sense of place are more likely to want to protect that place and to oppose the degradation of its environment (Tonge et al, 2015; Ramkissoon, Smith & Weiler, 2013; Halpenny, 2010; Stedman, 2002; Vaske & Kobrin, 2001). Some studies have suggested these links extend to more general care for the environment in everyday life (Halpenny, 2010; Vaske & Kobrin, 2001).

22. For those who already have positive attitudes toward the Earth, regular time in nature may play an affirming role by keeping it “top of mind” and increasing the likelihood that they will take action to its advantage (Thapa, 2010; Tarrant & Green, 1999; Manfredi, Yuan & McGuire, 1992). Making nature a part of people’s daily lives, habitual experiences, and regular, even frequent, experiences outdoors in nature are encouraged (Kellert et al, 2017).

23. Many people today, especially those with little or no connection to nature through direct experience, need and benefit from the company of family and friends to inspire joyful time in natural spaces. Such experience can be satisfied by places of nearby nature, which are the most accessible for most people.

24. A powerful and effective approach to engaging families and friends is occurring through the growth, internationally, of locally-driven, self-organising, groups of people interested in getting children outdoors in nature on a regular basis. Research conducted on some of these groups is finding enormous benefits to family bonding, enhanced confidence and creativity on the part of children, appreciation and respect for

their children's interests and strengths on the part of parents, and also increasing connectedness with nature (D'Amore, 2015; D'Amore & Chawla, 2017).

25. More than 40 years of research shows that meaningful childhood experiences in nature are connected to adult conservation behaviours. Findings based on diverse samples of people from many parts of the world demonstrate that two factors contribute most to children developing into adults who take action to benefit the Earth: positive direct experiences in nature during childhood and role models of care for nature by someone close to the child—for example, a parent, grandparent, or other trusted guardian (Chawla, 1998; Chawla, 2006; Chawla, 2009; Chawla & Derr, 2012).

26. In building pathways to conservation behaviour, intention, affect, emotions, and a subtle range of influences are all part of the process. Awareness and knowledge alone will not make the difference. Direct experiences, self-directed learning and play, repeated exposures, a perceived belief in one's own personal efficacy, a caring mentor, and an emotional bond or connectedness—these are among the strongest influencers.

27. Lack of personal experiences with nature, as well as lack of understanding of Indigenous relationships with nature, limit our understanding of environmental challenges and appropriate actions to address those challenges (Cajete, 2015). However, we humans are capable of reversing the trends of the immediate past and present in order to achieve a new and healthy relationship with nature, a relationship that embodies an inherently regenerative and life-nurturing way of being on Earth. This regenerative relationship, combined with informed and responsible action, will achieve a healing time on Earth. In the process, we will heal ourselves.

RECOMMENDATIONS FOR ACTION

28. For humans to thrive in harmony with nature, we must also recognise that barriers remain to increasing connectedness. Many attributes of contemporary life throughout the world contribute to disconnect between people and nature. These include, for example: Fear and perceptions; competing priorities; cultural differences; degraded environments; lack of resources; lack of transportation or access; school and academic environments; urbanisation.

29. Governments, organisations, and individuals across the world are implementing policies and practices to overcome these barriers. Below, we provide recommendations for programmes and policies that would support increased connectedness between people and nature. Additional examples of policy initiatives and proposed policy directions from global to local levels that would support implementation are provided in [CBD/SBSTTA/22/INF/34](#) and Charles et al (2018).

30. The evidence synthesized by Charles et al. (2018) and briefly reviewed here supports action in several areas:

- Take action for our children
- Take action for our health
- Take action for our communities
- Take action for our economies

Proposed Policy Directions to Connect People with Nature

31. Sectoral policies that would support these actions include:

- Education and child care policies that enable time outdoors in nature and experiential learning about nature in early childhood and throughout life;

- Health and elder care policies that embrace contact with nature as a mechanism for delivering physical and mental health benefits for all people of all ages;
- Community planning and urban development policies to create nature-rich cities that include parks and protected areas tailored to maximize the co-benefits for people and nature;
- Parks, outdoor recreation, and tourism policies that encourage family-friendly experiences; interpretive programmes; and outdoor, nature-based and experiential education;
- Arts and culture policies that promote the integration of culture and nature to develop a sense of oneness with nature while celebrating stories of connection and healing;
- Policies that encourage private sector investment in environmentally sustainable programming, infrastructure, and innovative solutions for connecting people with nature; and
- Policies that call for biodiversity conservation organisations to work across sectors so that all people, equitably and inclusively, experience the diverse benefits of connectedness with nature.

32. In order to create conditions for the development and implementation of policies and actions such as those described above, enhanced efforts to achieve Aichi Biodiversity Target 1, including coordination and implementation of CBD Decisions XII/2C, XIII/22, and XIII/6 should continue.

33. In addition, Parties to the CBD should consider enhanced action on connecting people with nature as a vehicle for achieving Target 1 and inspiring pro-conservation attitudes and behaviours, thereby accelerating progress towards achievement of other Aichi Biodiversity Targets and implementation of other initiatives carried out under the Convention, including recent decisions such as Decision XIII/6 on biodiversity and human health and Decision XIII/3 on mainstreaming).

34. The Post-2020 Biodiversity Framework should recognise growing societal disconnect from nature (e.g., through rapid urbanisation and other processes) as an important indirect driver of biodiversity loss; and it should include strategies for addressing this disconnect in order to bring about the transformations necessary to halt biodiversity loss and achieve the UN SDGs. Evidence about effective strategies for reversing the influence of disconnect from nature as a driver of biodiversity loss, such as that presented, should be used to guide post-2020 target-setting.

35. As Parties begin to prepare the post-2020 Biodiversity Framework, they should consider how enhanced action on connecting people with nature can be integrated into a renewed Strategic Plan. For example, a renewed version of Aichi Biodiversity Target 1 (or its equivalent in the Post-2020 Framework) should not only address awareness but also actions to increase connectedness of people from all walks of life with nature in order to inspire significantly-enhanced, broad-based public and cross-sectoral action on biodiversity conservation.

CONCLUSION: A CALL FOR INSPIRED ACTION

36. The time is now. The evidence is clear. One of the most important things that any of us can do for ourselves, those we love, people throughout the world, and the living systems that support us all is to connect with nature. That connection can start in the simplest of ways, beginning in childhood and renewing through all the stages of life. It can take many forms, and occur in many ways. It requires places and spaces for people to connect with nature's richness and complexity from backyards to apartment rooftops, on city streets and rural roadways, on school grounds and in urban neighbourhoods, from wild protected areas to public urban spaces. Connecting with nature helps to bring us all peace and good health, and provides the foundation for resilient, healthy ecosystems to thrive and remain for generations to come.

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